(3) Please amend the paragraph at page 10, lines 16-32 as follows:

After the halo implant is created, dopant atoms are implanted into regions 34 and 38 to form the heavily doped regions of the source and drain. The wafer W, which may have many such devices formed thereon is then annealed to repair the implant damage (restore the silicon lattice structure) and to activate the dopants (placing the dopant atoms on vacant sites). Finally, metal 20 and one or more intermediate layers 16 of an insulation material, such as a dielectric material of doped silicon dioxide are formed. The metal provides the necessary connections with other devices on the wager while the doped oxide serves as an intermediate dielectric to isolate the metal interconnect level from the polysilicon 32, 22. The steps for fabricating an actual MOS transistor involves many more steps. These steps are well known and are described in S.M. Sze, "VLSI Technology," 2nd. ed., New York: McGraw-Hill (1988).

IN THE CLAIMS:

(1) Please amend Claim 15 as follows:

15. (Amended) A MOS device comprising:

a gate structure on a semiconductor substrate, the gate structure having an upper layer of a hard mask material, the hard mask material being contoured such that it varies in thickness across the gate structure; and

a halo implant in the semiconductor substrate, the halo implant having a depth profile under the gate structure which follows at least a portion of the contour of the hard mask layer.

(2) Please add new Claims 21-30 as follows:

–21. (New) The device of Claim 15 wherein the hard mask layer is substantially dome-shaped.

22. (New) The device of Claim 15 wherein the hard mask layer contour has a top portion and side portions, wherein the depth profile of the halo implant under the gate structure follows the side portions of the hard mask layer contour.

23. (New) The device of Claim 22 further including a channel defined between regions of the halo implant, the regions defined by the depth profile following the side portions of the hard mask layer.

24. (New) The device of Claim 15 wherein the hard mask has a maximum thickness at a mid-point thereof and a minimum thickness at a periphery thereof.

25. (New) The device of Claim 24 wherein the minimum thickness is about zero.

26. (New) The device of claim 15 wherein a depth of the halo implant under an edge of the gate structure is substantially equal to a maximum thickness of the hard mask layer.

27. (New) The device of Claim 15 wherein the depth of the halo implant is substantially zero under a midpoint of the hard mask layer.